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Fig. 1a.1

GCGGCCTGGC TACCGCGCGC TCCGGAGGCC ATG CGG GCG TTG GCG CAG CGC AGC
Met Arg Ala Leu Ala Gln Arg Ser
-27 -25 -20

GAC CGG CGG CTG CTG CTG CTT GTT GTT TTG TCA GTA ATG ATT CTT GAG
Asp Arg Arg Leu Leu Leu Leu Val Val Leu Ser Val Met Ile Leu Glu
-15 -10 -5

ACC GTT ACA AAC CAA GAC CTG CCT GTG ATC AAG TGT GTT TTA ATC AGT
Thr Val Thr Asn Gln Asp Leu Pro Val Ile Lys Cys Val Leu Ile Ser
1 5 10

CAT GAG AAC AAT GGC TCA TCA GCG GGA AAG CCA TCA TCG TAC CGA ATG
His Glu Asn Asn Gly Ser Ser Ala Gly Lys Pro Ser Ser Tyr Arg Met
15 20 25

GTG CGA GGA TCC CCA GAA GAC CTC CAG TGT ACC CCG AGG CGC CAG AGT
Val Arg Gly Ser Pro Glu Asp Leu Gln Cys Thr Pro Arg Arg Gln Ser
30 35 40 45

GAA GGG ACG GTA TAT GAA GCG GCC ACC GTG GAG GTG GCC GAG TCT GGG
Glu Gly Thr Val Tyr Glu Ala Ala Thr Val Glu Val Ala Glu Ser Gly
50 55 60

TCC ATC ACC CTG CAA GTG CAG CTC GCC ACC CCA GGG GAC CTT TCC TGC
Ser Ile Thr Leu Gln Val Gln Leu Ala Thr Pro Gly Asp Leu Ser Cys
65 70 75

CTC TGG GTC TTT AAG CAC AGC TCC CTG GGC TGC CAG CCG CAC TTT GAT
Leu Trp Val Phe Lys His Ser Ser Leu Gly Cys Gln Pro His Phe Asp
80 85 90

TTA CAA AAC AGA GGA ATC GTT TCC ATG GCC ATC TTG AAC GTG ACA GAG
Leu Gln Asn Arg Gly Ile Val Ser Met Ala Ile Leu Asn Val Thr Glu
95 100 105

ACC CAG GCA GGA GAA TAC CTA CTC CAT ATT CAG AGC GAA CGC GCC AAC
Thr Gln Ala Gly Glu Tyr Leu Leu His Ile Gln Ser Glu Arg Ala Asn
110 115 120 125

TAC ACA GTA CTG TTC ACA GTG AAT GTA AGA GAT ACA CAG CTG TAT GTG
Tyr Thr Val Leu Phe Thr Val Asn Val Arg Asp Thr Gln Leu Tyr Val
130 135 140

CTA AGG AGA CCT TAC TTT AGG AAG ATG GAA AAC CAG GAT GCA CTG CTC
Leu Arg Arg Pro Tyr Phe Arg Lys Met Glu Asn Gln Asp Ala Leu Leu
145 150 155

Fig. 1a.2

TGC ATC TCC GAG GGT GTT CCG GAG CCC ACT GTG GAG TGG GTG CTC TGC
 Cys Ile Ser Glu Gly Val Pro Glu Pro Thr Val Glu Trp Val Leu Cys
 160 165 170

AGC TCC CAC AGG GAA AGC TGT AAA GAA GAA GGC CCT GCT GTT GTC AGA
 Ser Ser His Arg Glu Ser Cys Lys Glu Glu Gly Pro Ala Val Val Arg
 175 180 185

AAG GAG GAA AAG GTA CTT CAT GAG TTG TTC GGA ACA GAC ATC AGA TGC
 Lys Glu Glu Lys Val Leu His Glu Leu Phe Gly Thr Asp Ile Arg Cys
 190 195 200 205

TGT GCT AGA AAT GCA CTG GGC CGC GAA TGC ACC AAG CTG TTC ACC ATA
 Cys Ala Arg Asn Ala Leu Gly Arg Glu Cys Thr Lys Leu Phe Thr Ile
 210 215 220

GAT CTA AAC CAG GCT CCT CAG AGC ACA CTG CCC CAG TTA TTC CTG AAA
 Asp Leu Asn Gln Ala Pro Gln Ser Thr Leu Pro Gln Leu Phe Leu Lys
 225 230 235

GTG GGG GAA CCC TTG TGG ATC AGG TGT AAG GCC ATC CAT GTG AAC CAT
 Val Gly Glu Pro Leu Trp Ile Arg Cys Lys Ala Ile His Val Asn His
 240 245 250

GGA TTC GGG CTC ACC TGG GAG CTG GAA GAC AAA GCC CTG GAG GAG GGC
 Gly Phe Gly Leu Thr Trp Glu Leu Glu Asp Lys Ala Leu Glu Glu Gly
 255 260 265

AGC TAC TTT GAG ATG AGT ACC TAC TCC ACA AAC AGG ACC ATG ATT CGG
 Ser Tyr Phe Glu Met Ser Thr Tyr Ser Thr Asn Arg Thr Met Ile Arg
 270 275 280 285

ATT CTC TTG GCC TTT GTG TCT TCC GTG GGA AGG AAC GAC ACC GGA TAT
 Ile Leu Leu Ala Phe Val Ser Ser Val Gly Arg Asn Asp Thr Gly Tyr
 290 295 300

TAC ACC TGC TCT TCC TCA AAG CAC CCC AGC CAG TCA GCG TTG GTG ACC
 Tyr Thr Cys Ser Ser Ser Lys His Pro Ser Gln Ser Ala Leu Val Thr
 305 310 315

ATC CTA GAA AAA GGG TTT ATA AAC GCT ACC AGC TCG CAA GAA GAG TAT
 Ile Leu Glu Lys Gly Phe Ile Asn Ala Thr Ser Ser Gln Glu Glu Tyr
 320 325 330

GAA ATT GAC CCG TAC GAA AAG TTC TGC TTC TCA GTC AGG TTT AAA GCG
 Glu Ile Asp Pro Tyr Glu Lys Phe Cys Phe Ser Val Arg Phe Lys Ala
 335 340 345

Fig. 1a.3

TAC	CCA	CGA	ATC	CGA	TGC	ACG	TGG	ATC	TTC	TCT	CAA	GCC	TCA	TTT	CCT	
Tyr	Pro	Arg	Ile	Arg	Cys	Thr	Trp	Ile	Phe	Ser	Gln	Ala	Ser	Phe	Pro	
350					355					360					365	
TGT	GAA	CAG	AGA	GGC	CTG	GAG	GAT	GGG	TAC	AGC	ATA	TCT	AAA	TTT	TGC	
Cys	Glu	Gln	Arg	Gly	Leu	Glu	Asp	Gly	Tyr	Ser	Ile	Ser	Lys	Phe	Cys	
				370					375					380		
GAT	CAT	AAG	AAC	AAG	CCA	GGA	GAG	TAC	ATA	TTC	TAT	GCA	GAA	AAT	GAT	
Asp	His	Lys	Asn	Lys	Pro	Gly	Glu	Tyr	Ile	Phe	Tyr	Ala	Glu	Asn	Asp	
			385					390					395			
GAC	GCC	CAG	TTC	ACC	AAA	ATG	TTC	ACG	CTG	AAT	ATA	AGA	AAG	AAA	CCT	
Asp	Ala	Gln	Phe	Thr	Lys	Met	Phe	Thr	Leu	Asn	Ile	Arg	Lys	Lys	Pro	
		400					405					410				
CAA	GTG	CTA	GCA	AAT	GCC	TCA	GCC	AGC	CAG	GCG	TCC	TGT	TCC	TCT	GAT	
Gln	Val	Leu	Ala	Asn	Ala	Ser	Ala	Ser	Gln	Ala	Ser	Cys	Ser	Ser	Asp	
	415					420					425					
GGC	TAC	CCG	CTA	CCC	TCT	TGG	ACC	TGG	AAG	AAG	TGT	TCG	GAC	AAA	TCT	
Gly	Tyr	Pro	Leu	Pro	Ser	Trp	Thr	Trp	Lys	Lys	Cys	Ser	Asp	Lys	Ser	
430					435					440					445	
CCC	AAT	TGC	ACG	GAG	GAA	ATC	CCA	GAA	GGA	GTT	TGG	AAT	AAA	AAG	GCT	
Pro	Asn	Cys	Thr	Glu	Glu	Ile	Pro	Glu	Gly	Val	Trp	Asn	Lys	Lys	Ala	
				450					455					460		
AAC	AGA	AAA	GTG	TTT	GGC	CAG	TGG	GTG	TCG	AGC	AGT	ACT	CTA	AAT	ATG	
Asn	Arg	Lys	Val	Phe	Gly	Gln	Trp	Val	Ser	Ser	Ser	Thr	Leu	Asn	Met	
			465					470					475			
AGT	GAG	GCC	GGG	AAA	GGG	CTT	CTG	GTC	AAA	TGC	TGT	GCG	TAC	AAT	TCT	
Ser	Glu	Ala	Gly	Lys	Gly	Leu	Leu	Val	Lys	Cys	Cys	Ala	Tyr	Asn	Ser	
		480					485					490				
ATG	GGC	ACG	TCT	TGC	GAA	ACC	ATC	TTT	TTA	AAC	TCA	CCA	GGC	CCC	TTC	
Met	Gly	Thr	Ser	Cys	Glu	Thr	Ile	Phe	Leu	Asn	Ser	Pro	Gly	Pro	Phe	
	495					500					505					
CCT	TTC	ATC	CAA	GAC	AAC	ATC	TCC	TTC	TAT	GCG	ACC	ATT	GGG	CTC	TGT	
Pro	Phe	Ile	Gln	Asp	Asn	Ile	Ser	Phe	Tyr	Ala	Thr	Ile	Gly	Leu	Cys	
510					515					520					525	
CTC	CCC	TTC	ATT	GTT	GTT	CTC	ATT	GTG	TTG	ATC	TGC	CAC	AAA	TAC	AAA	
Leu	Pro	Phe	Ile	Val	Val	Leu	Ile	Val	Leu	Ile	Cys	His	Lys	Tyr	Lys	
				530					535					540		

Fig. 1a.4

AAG CAA TTT AGG TAC GAG AGT CAG CTG CAG ATG ATC CAG GTG ACT GGC
 Lys Gln Phe Arg Tyr Glu Ser Gln Leu Gln Met Ile Gln Val Thr Gly
 545 550 555

CCC CTG GAT AAC GAG TAC TTC TAC GTT GAC TTC AGG GAC TAT GAA TAT
 Pro Leu Asp Asn Glu Tyr Phe Tyr Val Asp Phe Arg Asp Tyr Glu Tyr
 560 565 570

GAC CTT AAG TGG GAG TTC CCG AGA GAG AAC TTA GAG TTT GGG AAG GTC
 Asp Leu Lys Trp Glu Phe Pro Arg Glu Asn Leu Glu Phe Gly Lys Val
 575 580 585

CTG GGG TCT GGC GCT TTC GGG AGG GTG ATG AAC GCC ACG GCC TAT GGC
 Leu Gly Ser Gly Ala Phe Gly Arg Val Met Asn Ala Thr Ala Tyr Gly
 590 595 600 605

ATT AGT AAA ACG GGA GTC TCA ATT CAG GTG GCG GTG AAG ATG CTA AAA
 Ile Ser Lys Thr Gly Val Ser Ile Gln Val Ala Val Lys Met Leu Lys
 610 615 620

GAG AAA GCT GAC AGC TGT GAA AAA GAA GCT CTC ATG TCG GAG CTC AAA
 Glu Lys Ala Asp Ser Cys Glu Lys Glu Ala Leu Met Ser Glu Leu Lys
 625 630 635

ATG ATG ACC CAC CTG GGA CAC CAT GAC AAC ATC GTG AAT CTG CTG GGG
 Met Met Thr His Leu Gly His His Asp Asn Ile Val Asn Leu Leu Gly
 640 645 650

GCA TGC ACA CTG TCA GGG CCA GTG TAC TTG ATT TTT GAA TAT TGT TGC
 Ala Cys Thr Leu Ser Gly Pro Val Tyr Leu Ile Phe Glu Tyr Cys Cys
 655 660 665

TAT GGT GAC CTC CTC AAC TAC CTA AGA AGT AAA AGA GAG AAG TTT CAC
 Tyr Gly Asp Leu Leu Asn Tyr Leu Arg Ser Lys Arg Glu Lys Phe His
 670 675 680 685

AGG ACA TGG ACA GAG ATT TTT AAG GAA CAT AAT TTC AGT TCT TAC CCT
 Arg Thr Trp Thr Glu Ile Phe Lys Glu His Asn Phe Ser Ser Tyr Pro
 690 695 700

ACT TTC CAG GCA CAT TCA AAT TCC AGC ATG CCT GGT TCA CGA GAA GTT
 Thr Phe Gln Ala His Ser Asn Ser Ser Met Pro Gly Ser Arg Glu Val
 705 710 715

CAG TTA CAC CCG CCC TTG GAT CAG CTC TCA GGG TTC AAT GGG AAT TCA
 Gln Leu His Pro Pro Leu Asp Gln Leu Ser Gly Phe Asn Gly Asn Ser
 720 725 730

Fig. 1a.5

ATT	CAT	TCT	GAA	GAT	GAG	ATT	GAA	TAT	GAA	AAC	CAG	AAG	AGG	CTG	GCA
Ile	His	Ser	Glu	Asp	Glu	Ile	Glu	Tyr	Glu	Asn	Gln	Lys	Arg	Leu	Ala
735						740					745				
GAA	GAA	GAG	GAG	GAA	GAT	TTG	AAC	GTG	CTG	ACG	TTT	GAA	GAC	CTC	CTT
Glu	Glu	Glu	Glu	Glu	Asp	Leu	Asn	Val	Leu	Thr	Phe	Glu	Asp	Leu	Leu
750					755					760					765
TGC	TTT	GCG	TAC	CAA	GTG	GCC	AAA	GGC	ATG	GAA	TTC	CTG	GAG	TTC	AAG
Cys	Phe	Ala	Tyr	Gln	Val	Ala	Lys	Gly	Met	Glu	Phe	Leu	Glu	Phe	Lys
				770					775					780	
TCG	TGT	GTC	CAC	AGA	GAC	CTG	GCA	GCC	AGG	AAT	GTG	TTG	GTC	ACC	CAC
Ser	Cys	Val	His	Arg	Asp	Leu	Ala	Ala	Arg	Asn	Val	Leu	Val	Thr	His
			785					790					795		
GGG	AAG	GTG	GTG	AAG	ATC	TGT	GAC	TTT	GGA	CTG	GCC	CGA	GAC	ATC	CTG
Gly	Lys	Val	Val	Lys	Ile	Cys	Asp	Phe	Gly	Leu	Ala	Arg	Asp	Ile	Leu
	800						805					810			
AGC	GAC	TCC	AGC	TAC	GTC	GTC	AGG	GGC	AAC	GCA	CGG	CTG	CCG	GTG	AAG
Ser	Asp	Ser	Ser	Tyr	Val	Val	Arg	Gly	Asn	Ala	Arg	Leu	Pro	Val	Lys
	815					820					825				
TGG	ATG	GCA	CCC	GAG	AGC	TTA	TTT	GAA	GGG	ATC	TAC	ACA	ATC	AAG	AGT
Trp	Met	Ala	Pro	Glu	Ser	Leu	Phe	Glu	Gly	Ile	Tyr	Thr	Ile	Lys	Ser
830					835					840					845
GAC	GTC	TGG	TCC	TAC	GGC	ATC	CTT	CTC	TGG	GAG	ATA	TTT	TCA	CTG	GGT
Asp	Val	Trp	Ser	Tyr	Gly	Ile	Leu	Leu	Trp	Glu	Ile	Phe	Ser	Leu	Gly
				850					855					860	
GTG	AAC	CCT	TAC	CCT	GGC	ATT	CCT	GTC	GAC	GCT	AAC	TTC	TAT	AAA	CTG
Val	Asn	Pro	Tyr	Pro	Gly	Ile	Pro	Val	Asp	Ala	Asn	Phe	Tyr	Lys	Leu
			865					870					875		
ATT	CAG	AGT	GGA	TTT	AAA	ATG	GAG	CAG	CCA	TTC	TAT	GCC	ACA	GAA	GGG
Ile	Gln	Ser	Gly	Phe	Lys	Met	Glu	Gln	Pro	Phe	Tyr	Ala	Thr	Glu	Gly
		880					885					890			
ATA	TAC	TTT	GTA	ATG	CAA	TCC	TGC	TGG	GCT	TTT	GAC	TCA	AGG	AAG	CGG
Ile	Tyr	Phe	Val	Met	Gln	Ser	Cys	Trp	Ala	Phe	Asp	Ser	Arg	Lys	Arg
	895					900					905				

Fig. 1a.6

CCA TCC TTC CCC AAC CTG ACT TCA TTT TTA GGA TGT CAG CTG GCA GAG
 Pro Ser Phe Pro Asn Leu Thr Ser Phe Leu Gly Cys Gln Leu Ala Glu
 910 915 920 925

GCA GAA GAA GCA TGT ATC AGA ACA TCC ATC CAT CTA CCA AAA CAG GCG
 Ala Glu Glu Ala Cys Ile Arg Thr Ser Ile His Leu Pro Lys Gln Ala
 930 935 940

GCC CCT CAG CAG AGA GGC GGG CTC AGA GCC CAG TCG CCA CAG CGC CAG
 Ala Pro Gln Gln Arg Gly Gly Leu Arg Ala Gln Ser Pro Gln Arg Gln
 945 950 955

GTG AAG ATT CAC AGA GAA AGA AGT TAGCGAGGAG GCCTTGGACC CCGCCACCCT
 Val Lys Ile His Arg Glu Arg Ser
 960 965

AGCAGGCTGT AGACCGCAGA GCCAAGATTA GCCTCGCCTC TGAGGAAGCG CCCTACAGCG
 CGTTGCTTCG CTGGACTTTT CTCTAGATGC TGTCTGCCAT TACTCCAAAG TGACTTCTAT
 AAAATCAAAC CTCTCCTCGC ACAGGCGGGA GAGCCAATAA TGAGACTTGT TGGTGAGCCC
 GCCTACCCTG GGGGCCTTTC CACGAGCTTG AGGGGAAAGC CATGTATCTG AAATATAGTA
 TATTCTTGTA AATACGTGAA ACAAACCAAA CCCGTTTTTT GCTAAGGGAA AGCTAAATAT
 GATTTTAAA AATCTATGTT TAAAATACT ATGTAACTTT TTCATCTATT TAGTGATATA
 TTTTATGGAT GGAAATAAAC TTTCTACTGT AAAAAAAAAA AAAAAAAAAA AAAAAA

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Fig. 1b.1

CGAGGCGGCA TCCGAGGGCT GGGCCGGCGC CCTGGGGGAC CCCGGGCTCC GGAGGCC
ATG CCG GCG TTG GCG CGC GAC GCG GGC ACC GTG CCG CTG CTC GTT GTT
Met Pro Ala Leu Ala Arg Asp Ala Gly Thr Val Pro Leu Leu Val Val
-27 -25 -20 -15
TTT TCT GCA ATG ATA TTT GGG ACT ATT ACA AAT CAA GAT CTG CCT GTG
Phe Ser Ala Met Ile Phe Gly Thr Ile Thr Asn Gln Asp Leu Pro Val
-10 -5 1 5
ATC AAG TGT GTT TTA ATC AAT CAT AAG AAC AAT GAT TCA TCA GTG GGG
Ile Lys Cys Val Leu Ile Asn His Lys Asn Asn Asp Ser Ser Val Gly
10 15 20
AAG TCA TCA TCA TAT CCC ATG GTA TCA GAA TCC CCG GAA GAC CTC GGG
Lys Ser Ser Ser Tyr Pro Met Val Ser Glu Ser Pro Glu Asp Leu Gly
25 30 35
TGT GCG TTG AGA CCC CAG AGC TCA GGG ACA GTG TAC GAA GCT GCC GCT
Cys Ala Leu Arg Pro Gln Ser Ser Gly Thr Val Tyr Glu Ala Ala Ala
40 45 50
GTG GAA GTG GAT GTA TCT GCT TCC ATC ACA CTG CAA GTG CTG GTC GAT
Val Glu Val Val Asp Val Ser Ala Ser Ile Thr Leu Gln Val Leu Val Asp
55 60 65
GCC CCA GGG AAC ATT TCC TGT CTC TGG GTC TTT AAG CAC AGC TCC CTG
Ala Pro Gly Asn Ile Ser Cys Leu Trp Val Phe Lys His Ser Ser Leu
70 75 80 85
AAT TGC CAG CCA CAT TTT GAT TTA CAA AAC AGA GGA GTT GTT TCC ATG
Asn Cys Gln Pro His Phe Asp Leu Gln Asn Arg Gly Val Val Ser Met
90 95 100
GTC ATT TTG AAA ATG ACA GAA ACC CAA GCT GGA GAA TAC CTA CTT TTT
Val Ile Leu Lys Met Thr Glu Thr Gln Ala Gly Glu Tyr Leu Leu Phe
105 110 115
ATT CAG AGT GAA GCT ACC AAT TAC ACA ATA TTG TTT ACA GTG AGT ATA
Ile Gln Ser Glu Ala Thr Asn Tyr Thr Ile Leu Phe Thr Val Ser Ile
120 125 130
AGA AAT ACC CTG CTT TAC ACA TTA AGA AGA CCT TAC TTT AGA AAA ATG
Arg Asn Thr Leu Leu Tyr Thr Leu Arg Arg Pro Tyr Phe Arg Lys Met
135 140 145

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Fig. 1b.2

GAA AAC CAG GAC GCC CTG GTC TGC ATA TCT GAG AGC GTT CCA GAG CCG
Glu Asn Gln Asp Ala Leu Val Cys Ile Ser Glu Ser Val Pro Glu Pro
150 155 160 165

ATC GTG GAA TGG GTG CTT TGC GAT TCA CAG GGG GAA AGC TGT AAA GAA
Ile Val Glu Trp Val Leu Cys Asp Ser Gln Gly Glu Ser Cys Lys Glu
170 175 180

GAA AGT CCA GCT GTT GTT AAA AAG GAG GAA AAA GTG CTT CAT GAA TTA
Glu Ser Pro Ala Val Val Lys Lys Glu Glu Lys Val Leu His Glu Leu
185 190 195

TTT GGG ACG GAC ATA AGG TGC TGT GCC AGA AAT GAA CTG GGC AGG GAA
Phe Gly Thr Asp Ile Arg Cys Cys Ala Arg Asn Glu Leu Gly Arg Glu
200 205 210

TGC ACC AGG CTG TTC ACA ATA GAT CTA AAT CAA ACT CCT CAG ACC ACA
Cys Thr Arg Leu Phe Thr Ile Asp Leu Asn Gln Thr Pro Gln Thr Thr
215 220 225

TTG CCA CAA TTA TTT CTT AAA GTA GGG GAA CCC TTA TGG ATA AGG TGC
Leu Pro Gln Leu Phe Leu Lys Val Gly Glu Pro Leu Trp Ile Arg Cys
230 235 240 245

AAA GCT GTT CAT GTG AAC CAT GGA TTC GGG CTC ACC TGG GAA TTA GAA
Lys Ala Val His Val Asn His Gly Phe Gly Leu Thr Trp Glu Leu Glu
250 255 260

AAC AAA GCA CTC GAG GAG GGC AAC TAC TTT GAG ATG AGT ACC TAT TCA
Asn Lys Ala Leu Glu Glu Gly Asn Tyr Phe Glu Met Ser Thr Tyr Ser
265 270 275

ACA AAC AGA ACT ATG ATA CGG ATT CTG TTT GCT TTT GTA TCA TCA GTG
Thr Asn Arg Thr Met Ile Arg Ile Leu Phe Ala Phe Val Ser Ser Val
280 285 290

GCA AGA AAC GAC ACC GGA TAC TAC ACT TGT TCC TCT TCA AAG CAT CCC
Ala Arg Asn Asp Thr Gly Tyr Tyr Thr Cys Ser Ser Ser Lys His Pro
295 300 305

AGT CAA TCA GCT TTG GTT ACC ATC GTA GGA AAG GGA TTT ATA AAT GCT
Ser Gln Ser Ala Leu Val Thr Ile Val Gly Lys Gly Phe Ile Asn Ala
310 315 320 325

ACC AAT TCA AGT GAA GAT TAT GAA ATT GAC CAA TAT GAA GAG TTT TGT
Thr Asn Ser Ser Glu Asp Tyr Glu Ile Asp Gln Tyr Glu Glu Phe Cys
330 335 340

1

100

TTT TCT GTC AGG TTT AAA GCC TAC CCA CAA ATC AGA TGT ACG TGG ACC
Phe Ser Val Arg Phe Lys Ala Tyr Pro Gln Ile Arg Cys Thr Trp Thr
345 350 355

TTC TCT CGA AAA TCA TTT CCT TGT GAG CAA AAG GGT CTT GAT AAC GGA
Phe Ser Arg Lys Ser Phe Pro Cys Glu Gln Lys Gly Leu Asp Asn Gly
360 365 370

TAC AGC ATA TCC AAG TTT TGC AAT CAT AAG CAC CAG CCA GGA GAA TAT
Tyr Ser Ile Ser Lys Phe Cys Asn His Lys His Gln Pro Gly Glu Tyr
375 380 385

ATA TTC CAT GCA GAA AAT GAT GAT GCC CAA TTT ACC AAA ATG TTC ACG
Ile Phe His Ala Glu Asn Asp Asp Ala Gln Phe Thr Lys Met Phe Thr
390 395 400 405

CTG AAT ATA AGA AGG AAA CCT CAA GTG CTC GCA GAA GCA TCG GCA AGT
Leu Asn Ile Arg Arg Lys Pro Gln Val Leu Ala Glu Ala Ser Ala Ser
410 415 420

CAG GCG TCC TGT TTC TCG GAT GGA TAC CCA TTA CCA TCT TGG ACC TGG
Gln Ala Ser Cys Phe Ser Asp Gly Tyr Pro Leu Pro Ser Trp Thr Trp
425 430 435

AAG AAG TGT TCA GAC AAG TCT CCC AAC TGC ACA GAA GAG ATC ACA GAA
Lys Lys Cys Ser Asp Lys Ser Pro Asn Cys Thr Glu Glu Ile Thr Glu
440 445 450

GGA GTC TGG AAT AGA AAG GCT AAC AGA AAA GTG TTT GGA CAG TGG GTG
Gly Val Trp Asn Arg Lys Ala Asn Arg Lys Val Phe Gly Gln Trp Val
455 460 465

TCG AGC AGT ACT CTA AAC ATG AGT GAA GCC ATA AAA GGG TTC CTG GTC
Ser Ser Ser Thr Leu Asn Met Ser Glu Ala Ile Lys Gly Phe Leu Val
470 475 480 485

AAG TGC TGT GCA TAC AAT TCC CTT GGC ACA TCT TGT GAG ACG ATC CTT
Lys Cys Cys Ala Tyr Asn Ser Leu Gly Thr Ser Cys Glu Thr Ile Leu
490 495 500

TTA AAC TCT CCA GGC CCC TTC CCT TTC ATC CAA GAC AAC ATC TCA TTC
Leu Asn Ser Pro Gly Pro Phe Pro Phe Ile Gln Asp Asn Ile Ser Phe
505 510 515

TAT GCA ACA ATT GGT GTT TGT CTC CTC TTC ATT GTC GTT TTA ACC CTG
Tyr Ala Thr Ile Gly Val Cys Leu Leu Phe Ile Val Val Leu Thr Leu
520 525 530

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Fig. 1b.4

CTA ATT TGT CAC AAG TAC AAA AAG CAA TTT AGG TAT GAA AGC CAG CTA
Leu Ile Cys His Lys Tyr Lys Lys Gln Phe Arg Tyr Glu Ser Gln Leu
535 540 545

CAG ATG GTA CAG GTG ACC GGC TCC TCA GAT AAT GAG TAC TTC TAC GTT
Gln Met Val Gln Val Thr Gly Ser Ser Asp Asn Glu Tyr Phe Tyr Val
550 555 560 565

GAT TTC AGA GAA TAT GAA TAT GAT CTC AAA TGG GAG TTT CCA AGA GAA
Asp Phe Arg Glu Tyr Glu Tyr Asp Leu Lys Trp Glu Phe Pro Arg Glu
570 575 580

AAT TTA GAG TTT GGG AAG GTA CTA GGA TCA GGT GCT TTT GGA AAA GTG
Asn Leu Glu Phe Gly Lys Val Leu Gly Ser Gly Ala Phe Gly Lys Val
585 590 595

ATG AAC GCA ACA GCT TAT GGA ATT AGC AAA ACA GGA GTC TCA ATC CAG
Met Asn Ala Thr Ala Tyr Gly Ile Ser Lys Thr Gly Val Ser Ile Gln
600 605 610

GTT GCC GTC AAA ATG CTG AAA GAA AAA GCA GAC AGC TCT GAA AGA GAG
Val Ala Val Lys Met Leu Lys Glu Lys Ala Asp Ser Ser Glu Arg Glu
615 620 625

GCA CTC ATG TCA GAA CTC AAG ATG ATG ACC CAG CTG GGA AGC CAC GAG
Ala Leu Met Ser Glu Leu Lys Met Met Thr Gln Leu Gly Ser His Glu
630 635 640 645

AAT ATT GTG AAC CTG CTG GGG GCG TGC ACA CTG TCA GGA CCA ATT TAC
Asn Ile Val Asn Leu Leu Gly Ala Cys Thr Leu Ser Gly Pro Ile Tyr
650 655 660

TTG ATT TTT GAA TAC TGT TGC TAT GGT GAT CTT CTC AAC TAT CTA AGA
Leu Ile Phe Glu Tyr Cys Cys Tyr Gly Asp Leu Leu Asn Tyr Leu Arg
665 670 675

AGT AAA AGA GAA AAA TTT CAC AGG ACT TGG ACA GAG ATT TTC AAG GAA
Ser Lys Arg Glu Lys Phe His Arg Thr Trp Thr Glu Ile Phe Lys Glu
680 685 690

CAC AAT TTC AGT TTT TAC CCC ACT TTC CAA TCA CAT CCA AAT TCC AGC
His Asn Phe Ser Phe Tyr Pro Thr Phe Gln Ser His Pro Asn Ser Ser
695 700 705

ATG CCT GGT TCA AGA GAA GTT CAG ATA CAC CCG GAC TCG GAT CAA ATC
Met Pro Gly Ser Arg Glu Val Gln Ile His Pro Asp Ser Asp Gln Ile
710 715 720 725

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Fig. 1b.5

TCA GGG CTT CAT GGG AAT TCA TTT CAC TCT GAA GAT GAA ATT GAA TAT
Ser Gly Leu His Gly Asn Ser Phe His Ser Glu Asp Glu Ile Glu Tyr
730 735 740

GAA AAC CAA AAA AGG CTG GAA GAA GAG GAG GAC TTG AAT GTG CTT ACA
Glu Asn Gln Lys Arg Leu Glu Glu Glu Glu Asp Leu Asn Val Leu Thr
745 750 755

TTT GAA GAT CTT CTT TGC TTT GCA TAT CAA GTT GCC AAA GGA ATG GAA
Phe Glu Asp Leu Leu Cys Phe Ala Tyr Gln Val Ala Lys Gly Met Glu
760 765 770

TTT CTG GAA TTT AAG TCG TGT GTT CAC AGA GAC CTG GCC GCC AGG AAC
Phe Leu Glu Phe Lys Ser Cys Val His Arg Asp Leu Ala Ala Arg Asn
775 780 785

GTG CTT GTC ACC CAC GGG AAA GTG GTG AAG ATA TGT GAC TTT GGA TTG
Val Leu Val Thr His Gly Lys Val Val Lys Ile Cys Asp Phe Gly Leu
790 795 800 805

GCT CGA GAT ATC ATG AGT GAT TCC AAC TAT GTT GTC AGG GGC AAT GCC
Ala Arg Asp Ile Met Ser Asp Ser Asn Tyr Val Val Arg Gly Asn Ala
810 815 820

CGT CTG CCT GTA AAA TGG ATG GCC CCC GAA AGC CTG TTT GAA GGC ATC
Arg Leu Pro Val Lys Trp Met Ala Pro Glu Ser Leu Phe Glu Gly Ile
825 830 835

TAC ACC ATT AAG AGT GAT GTC TGG TCA TAT GGA ATA TTA CTG TGG GAA
Tyr Thr Ile Lys Ser Asp Val Trp Ser Tyr Gly Ile Leu Leu Trp Glu
840 845 850

ATC TTC TCA CTT GGT GTG AAT CCT TAC CCT GGC ATT CCG GTT GAT GCT
Ile Phe Ser Leu Gly Val Asn Pro Tyr Pro Gly Ile Pro Val Asp Ala
855 860 865

AAC TTC TAC AAA CTG ATT CAA AAT GGA TTT AAA ATG GAT CAG CCA TTT
Asn Phe Tyr Lys Leu Ile Gln Asn Gly Phe Lys Met Asp Gln Pro Phe
870 875 880 885

TAT GCT ACA GAA GAA ATA TAC ATT ATA ATG CAA TCC TGC TGG GCT TTT
Tyr Ala Thr Glu Glu Ile Tyr Ile Ile Met Gln Ser Cys Trp Ala Phe
890 895 900

GAC TCA AGG AAA CGG CCA TCC TTC CCT AAT TTG ACT TCG TTT TTA GGA
Asp Ser Arg Lys Arg Pro Ser Phe Pro Asn Leu Thr Ser Phe Leu Gly
905 910 915

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Fig. 1b.6

TGT CAG CTG GCA GAT GCA GAA GAA GCG ATG TAT CAG AAT GTG GAT GGC
Cys Gln Leu Ala Asp Ala Glu Glu Ala Met Tyr Gln Asn Val Asp Gly
920 925 930

CGT GTT TCG GAA TGT CCT CAC ACC TAC CAA AAC AGG CGA CCT TTC AGC
Arg Val Ser Glu Cys Pro His Thr Tyr Gln Asn Arg Arg Pro Phe Ser
935 940 945

AGA GAG ATG GAT TTG GGG CTA CTC TCT CCG CAG GCT CAG GTC GAA GAT
Arg Glu Met Asp Leu Gly Leu Leu Ser Pro Gln Ala Gln Val Glu Asp
950 955 960 965

TCG TAGAGGAACA ATTTAGTTTT AAGGACTTCA TCCCTCCACC TATCCCTAAC
Ser

AGGCTGTAGA TTACCAAAAC AAGATTAATT TCATCACTAA AAGAAAATCT ATTATCAACT
GCTGCTTCAC CAGACTTTTC TCTAGAAGCC GTCTGCGTTT ACTCTTGTTT TCAAAGGGAC
TTTTGTAAAA TCAAATCATC CTGTCACAAG GCAGGAGGAG CTGATAATGA ACTTTATTGG
AGCATTGATC TGCATCCAAG GCCTTCTCAG GCCGGCTTGA GTGAATTGTG TACCTGAAGT
ACAGTATATT CTTGTAAATA CATAAAACAA AAGCATTTTG CTAAGGAGAA GCTAATATGA
TTTTTTAAGT CTATGTTTTA AAATAATATG TAAATTTTTC AGCTATTTAG TGATATATTT
TATGGGTGGG AATAAAATTT CTA CTACAGA AAAAAAAAAA AAAAAAAAAA AAAAA

1

CTGTGTCCCG CAGCCGGATA ACCTGGCTGA CCCGATTCCG CGGACACCCG TGCAGCCGCG
GCTGGAGCCA GGGCGCCGGT GCCCGCGCTC TCCCCGGTCT TCGCTGCGG GGGCCGATAC
CGCCTCTGTG ACTTCTTTGC GGGCCAGGGA CGGAGAAGGA GTCTGTGCCT GAGAACTCG
GCTCTGTGCC CAGGCGCGAG GTGCAGG ATG GAG AGC AAG GGC CTG CTA GCT
Met Glu Ser Lys Gly Leu Leu Ala
-19 -15
GTC GCT CTG TGG TTC TGC GTG GAG ACC CGA GCC GCC TCT GTG GGT TTG
Val Ala Leu Trp Phe Cys Val Glu Thr Arg Ala Ala Ser Val Gly Leu
-10 -5 1 5
CCT GGC GAT TTT CTC CAT CCC CCC AAG CTC AGC ACA CAG AAA GAC ATA
Pro Gly Asp Phe Leu His Pro Pro Lys Leu Ser Thr Gln Lys Asp Ile
10 15 20
CTG ACA ATT TTG GCA AAT ACA ACC CTT CAG ATT ACT TGC AGG GGA CAG
Leu Thr Ile Leu Ala Asn Thr Thr Leu Gln Ile Thr Cys Arg Gly Gln
25 30 35
CGG GAC CTG GAC TGG CTT TGG CCC AAT GCT CAG CGT GAT TCT GAG GAA
Arg Asp Leu Asp Trp Leu Trp Pro Asn Ala Gln Arg Asp Ser Glu Glu
40 45 50
AGG GTA TTG GTG ACT GAA TGC GGC GGT GGT GAC AGT ATC TTC TGC AAA
Arg Val Leu Val Thr Glu Cys Gly Gly Gly Asp Ser Ile Phe Cys Lys
55 60 65
ACA CTC ACC ATT CCC AGG GTG GTT GGA AAT GAT ACT GGA GCC TAC AAG
Thr Leu Thr Ile Pro Arg Val Val Gly Asn Asp Thr Gly Ala Tyr Lys
70 75 80 85
TGC TCG TAC CGG GAC GTC GAC ATA GCC TCC ACT GTT TAT GTC TAT GTT
Cys Ser Tyr Arg Asp Val Asp Ile Ala Ser Thr Val Tyr Val Tyr Val
90 95 100
CGA GAT TAC AGA TCA CCA TTC ATC GCC TCT GTC AGT GAC CAG CAT GGC
Arg Asp Tyr Arg Ser Pro Phe Ile Ala Ser Val Ser Asp Gln His Gly
105 110 115
ATC GTG TAC ATC ACC GAG AAC AAG AAC AAA ACT GTG GTG ATC CCC TGC
Ile Val Tyr Ile Thr Glu Asn Lys Asn Lys Thr Val Val Ile Pro Cys
120 125 130

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Fig. 2.2

CGA GGG TCG ATT TCA AAC CTC AAT GTG TCT CTT TGC GCT AGG TAT CCA
Arg Gly Ser Ile Ser Asn Leu Asn Val Ser Leu Cys Ala Arg Tyr Pro
135 140 145

GAA AAG AGA TTT GTT CCG GAT GGA AAC AGA ATT TCC TGG GAC AGC GAG
Glu Lys Arg Phe Val Pro Asp Gly Asn Arg Ile Ser Trp Asp Ser Glu
150 155 160 165

ATA GGC TTT ACT CTC CCC AGT TAC ATG ATC AGC TAT GCC GGC ATG GTC
Ile Gly Phe Thr Leu Pro Ser Tyr Met Ile Ser Tyr Ala Gly Met Val
170 175 180

TTC TGT GAG GCA AAG ATC AAT GAT GAA ACC TAT CAG TCT ATC ATG TAC
Phe Cys Glu Ala Lys Ile Asn Asp Glu Thr Tyr Gln Ser Ile Met Tyr
185 190 195

ATA GTT GTG GTT GTA GGA TAT AGG ATT TAT GAT GTG ATT CTG AGC CCC
Ile Val Val Val Val Gly Tyr Arg Ile Tyr Asp Val Ile Leu Ser Pro
200 205 210

CCG CAT GAA ATT GAG CTA TCT GCC GGA GAA AAA CTT GTC TTA AAT TGT
Pro His Glu Ile Glu Leu Ser Ala Gly Glu Lys Leu Val Leu Asn Cys
215 220 225

ACA GCG AGA ACA GAG CTC AAT GTG GGG CTT GAT TTC ACC TGG CAC TCT
Thr Ala Arg Thr Glu Leu Asn Val Gly Leu Asp Phe Thr Trp His Ser
230 235 240 245

CCA CCT TCA AAG TCT CAT CAT AAG AAG ATT GTA AAC CGG GAT GTG AAA
Pro Pro Ser Lys Ser His His Lys Lys Ile Val Asn Arg Asp Val Lys
250 255 260

CCC TTT CCT GGG ACT GTG GCG AAG ATG TTT TTG AGC ACC TTG ACA ATA
Pro Phe Pro Gly Thr Val Ala Lys Met Phe Leu Ser Thr Leu Thr Ile
265 270 275

GAA AGT GTG ACC AAG AGT GAC CAA GGG GAA TAC ACC TGT GTA GCG TCC
Glu Ser Val Thr Lys Ser Asp Gln Gly Glu Tyr Thr Cys Val Ala Ser
280 285 290

AGT GGA CGG ATG ATC AAG AGA AAT AGA ACA TTT GTC CGA GTT CAC ACA
Ser Gly Arg Met Ile Lys Arg Asn Arg Thr Phe Val Arg Val His Thr
295 300 305

AAG CCT TTT ATT GCT TTC GGT AGT GGG ATG AAA TCT TTG GTG GAA GCC
Lys Pro Phe Ile Ala Phe Gly Ser Gly Met Lys Ser Leu Val Glu Ala
310 315 320 325

Fig. 2.3

ACA GTG GGC AGT CAA GTC CGA ATC CCT GTG AAG TAT CTC AGT TAC CCA
 Thr Val Gly Ser Gln Val Arg Ile Pro Val Lys Tyr Leu Ser Tyr Pro
 330 335 340

GCT CCT GAT ATC AAA TGG TAC AGA AAT GGA AGG CCC ATT GAG TCC AAC
 Ala Pro Asp Ile Lys Trp Tyr Arg Asn Gly Arg Pro Ile Glu Ser Asn
 345 350 355

TAC ACA ATG ATT GTT GGC GAT GAA CTC ACC ATC ATG GAA GTG ACT GAA
 Tyr Thr Met Ile Val Gly Asp Glu Leu Thr Ile Met Glu Val Thr Glu
 360 365 370

AGA GAT GCA GGA AAC TAC ACG GTC ATC CTC ACC AAC CCC ATT TCA ATG
 Arg Asp Ala Gly Asn Tyr Thr Val Ile Leu Thr Asn Pro Ile Ser Met
 375 380 385

GAG AAA CAG AGC CAC ATG GTC TCT CTG GTT GTG AAT GTC CCA CCC CAG
 Glu Lys Gln Ser His Met Val Ser Leu Val Val Asn Val Pro Pro Gln
 390 395 400 405

ATC GGT GAG AAA GCC TTG ATC TCG CCT ATG GAT TCC TAC CAG TAT GGG
 Ile Gly Glu Lys Ala Leu Ile Ser Pro Met Asp Ser Tyr Gln Tyr Gly
 410 415 420

ACC ATG CAG ACA TTG ACA TGC ACA GTC TAC GCC AAC CCT CCC CTG CAC
 Thr Met Gln Thr Leu Thr Cys Thr Val Tyr Ala Asn Pro Pro Leu His
 425 430 435

CAC ATC CAG TGG TAC TGG CAG CTA GAA GAA GCC TGC TCC TAC AGA CCC
 His Ile Gln Trp Tyr Trp Gln Leu Glu Glu Ala Cys Ser Tyr Arg Pro
 440 445 450

GGC CAA ACA AGC CCG TAT GCT TGT AAA GAA TGG AGA CAC GTG GAG GAT
 Gly Gln Thr Ser Pro Tyr Ala Cys Lys Glu Trp Arg His Val Glu Asp
 455 460 465

TTC CAG GGG GGA AAC AAG ATC GAA GTC ACC AAA AAC CAA TAT GCC CTG
 Phe Gln Gly Gly Asn Lys Ile Glu Val Thr Lys Asn Gln Tyr Ala Leu
 470 475 480 485

ATT GAA GGA AAA AAC AAA ACT GTA AGT ACG CTG GTC ATC CAA GCT GCC
 Ile Glu Gly Lys Asn Lys Thr Val Ser Thr Leu Val Ile Gln Ala Ala
 490 495 500

AAC GTG TCA GCG TTG TAC AAA TGT GAA GCC ATC AAC AAA GCG GGA CGA
 Asn Val Ser Ala Leu Tyr Lys Cys Glu Ala Ile Asn Lys Ala Gly Arg
 505 510 515

Fig. 2.4

GGA GAG AGG GTC ATC TCC TTC CAT GTG ATC AGG GGT CCT GAA ATT ACT
 Gly Glu Arg Val Ile Ser Phe His Val Ile Arg Gly Pro Glu Ile Thr
 520 525 530

GTG CAA CCT GCT GCC CAG CCA ACT GAG CAG GAG AGT GTG TCC CTG TTG
 Val Gln Pro Ala Ala Gln Pro Thr Glu Gln Glu Ser Val Ser Leu Leu
 535 540 545

TGC ACT GCA GAC AGA AAT ACG TTT GAG AAC CTC ACG TGG TAC AAG CTT
 Cys Thr Ala Asp Arg Asn Thr Phe Glu Asn Leu Thr Trp Tyr Lys Leu
 550 555 560 565

GGC TCA CAG GCA ACA TCG GTC CAC ATG GGC GAA TCA CTC ACA CCA GTT
 Gly Ser Gln Ala Thr Ser Val His Met Gly Glu Ser Leu Thr Pro Val
 570 575 580

TGC AAG AAC TTG GAT GCT CTT TGG AAA CTG AAT GGC ACC ATG TTT TCT
 Cys Lys Asn Leu Asp Ala Leu Trp Lys Leu Asn Gly Thr Met Phe Ser
 585 590 595

AAC AGC ACA AAT GAC ATC TTG ATT GTG GCA TTT CAG AAT GCC TCT CTG
 Asn Ser Thr Asn Asp Ile Leu Ile Val Ala Phe Gln Asn Ala Ser Leu
 600 605 610

CAG GAC CAA GGC GAC TAT GTT TGC TCT GCT CAA GAT AAG AAG ACC AAG
 Gln Asp Gln Gly Asp Tyr Val Cys Ser Ala Gln Asp Lys Lys Thr Lys
 615 620 625

AAA AGA CAT TGC CTG GTC AAA CAG CTC ATC ATC CTA GAG CGC ATG GCA
 Lys Arg His Cys Leu Val Lys Gln Leu Ile Ile Leu Glu Arg Met Ala
 630 635 640 645

CCC ATG ATC ACC GGA AAT CTG GAG AAT CAG ACA ACA ACC ATT GGC GAG
 Pro Met Ile Thr Gly Asn Leu Glu Asn Gln Thr Thr Thr Ile Gly Glu
 650 655 660

ACC ATT GAA GTG ACT TGC CCA GCA TCT GGA AAT CCT ACC CCA CAC ATT
 Thr Ile Glu Val Thr Cys Pro Ala Ser Gly Asn Pro Thr Pro His Ile
 665 670 675

ACA TGG TTC AAA GAC AAC GAG ACC CTG GTA GAA GAT TCA GGC ATT GTA
 Thr Trp Phe Lys Asp Asn Glu Thr Leu Val Glu Asp Ser Gly Ile Val
 680 685 690

CTG AGA GAT GGG AAC CGG AAC CTG ACT ATC CGC AGG GTG AGG AAG GAG
 Leu Arg Asp Gly Asn Arg Asn Leu Thr Ile Arg Arg Val Arg Lys Glu
 695 700 705

Fig. 2.5

GAT GGA GGC CTC TAC ACC TGC CAG GCC TGC AAT GTC CTT GGC TGT GCA
 Asp Gly Gly Leu Tyr Thr Cys Gln Ala Cys Asn Val Leu Gly Cys Ala
 710 715 720 725

AGA GCG GAG ACG CTC TTC ATA ATA GAA GGT GCC CAG GAA AAG ACC AAC
 Arg Ala Glu Thr Leu Phe Ile Ile Glu Gly Ala Gln Glu Lys Thr Asn
 730 735 740

TTG GAA GTC ATT ATC CTC GTC GGC ACT GCA GTG ATT GCC ATG TTC TTC
 Leu Glu Val Ile Ile Leu Val Gly Thr Ala Val Ile Ala Met Phe Phe
 745 750 755

TGG CTC CTT CTT GTC ATT CTC GTA CGG ACC GTT AAG CGG GCC AAT GAA
 Trp Leu Leu Leu Val Ile Leu Val Arg Thr Val Lys Arg Ala Asn Glu
 760 765 770

GGG GAA CTG AAG ACA GGC TAC TTG TCT ATT GTC ATG GAT CCA GAT GAA
 Gly Glu Leu Lys Thr Gly Tyr Leu Ser Ile Val Met Asp Pro Asp Glu
 775 780 785

TTG CCC TTG GAT GAG CGC TGT GAA CGC TTG CCT TAT GAT GCC AGC AAG
 Leu Pro Leu Asp Glu Arg Cys Glu Arg Leu Pro Tyr Asp Ala Ser Lys
 790 795 800 805

TGG GAA TTC CCC AGG GAC CGG CTG AAA CTA GGA AAA CCT CTT GGC CGC
 Trp Glu Phe Pro Arg Asp Arg Leu Lys Leu Gly Lys Pro Leu Gly Arg
 810 815 820

GGT GCC TTC GGC CAA GTG ATT GAG GCA GAC GCT TTT GGA ATT GAC AAG
 Gly Ala Phe Gly Gln Val Ile Glu Ala Asp Ala Phe Gly Ile Asp Lys
 825 830 835

ACA GCG ACT TGC AAA ACA GTA GCC GTC AAG ATG TTG AAA GAA GGA GCA
 Thr Ala Thr Cys Lys Thr Val Ala Val Lys Met Leu Lys Glu Gly Ala
 840 845 850

ACA CAC AGC GAG CAT CGA GCC CTC ATG TCT GAA CTC AAG ATC CTC ATC
 Thr His Ser Glu His Arg Ala Leu Met Ser Glu Leu Lys Ile Leu Ile
 855 860 865

CAC ATT GGT CAC CAT CTC AAT GTG GTG AAC CTC CTA GGC GCC TGC ACC
 His Ile Gly His His Leu Asn Val Val Asn Leu Leu Gly Ala Cys Thr
 870 875 880 885

AAG CCG GGA GGG CCT CTC ATG GTG ATT GTG GAA TTC TCG AAG TTT GGA
 Lys Pro Gly Gly Pro Leu Met Val Ile Val Glu Phe Ser Lys Phe Gly
 890 895 900

Fig. 2.6

AAC CTA TCA ACT TAC TTA CGG GGC AAG AGA AAT GAA TTT GTT CCC TAT
 Asn Leu Ser Thr Tyr Leu Arg Gly Lys Arg Asn Glu Phe Val Pro Tyr
 905 910 915

AAG AGC AAA GGG GCA CGC TTC CGC CAG GGC AAG GAC TAC GTT GGG GAG
 Lys Ser Lys Gly Ala Arg Phe Arg Gln Gly Lys Asp Tyr Val Gly Glu
 920 925 930

CTC TCC GTG GAT CTG AAA AGA CGC TTG GAC AGC ATC ACC AGC AGC CAG
 Leu Ser Val Asp Leu Lys Arg Arg Leu Asp Ser Ile Thr Ser Ser Gln
 935 940 945

AGC TCT GCC AGC TCA GGC TTT GTT GAG GAG AAA TCG CTC AGT GAT GTA
 Ser Ser Ala Ser Ser Gly Phe Val Glu Glu Lys Ser Leu Ser Asp Val
 950 955 960 965

GAG GAA GAA GAA GCT TCT GAA GAA CTG TAC AAG GAC TTC CTG ACC TTG
 Glu Glu Glu Glu Ala Ser Glu Glu Leu Tyr Lys Asp Phe Leu Thr Leu
 970 975 980

GAG CAT CTC ATC TGT TAC AGC TTC CAA GTG GCT AAG GGC ATG GAG TTC
 Glu His Leu Ile Cys Tyr Ser Phe Gln Val Ala Lys Gly Met Glu Phe
 985 990 995

TTG GCA TCA AGG AAG TGT ATC CAC AGG GAC CTG GCA GCA CGA AAC ATT
 Leu Ala Ser Arg Lys Cys Ile His Arg Asp Leu Ala Ala Arg Asn Ile
 1000 1005 1010

CTC CTA TCG GAG AAG AAT GTG GTT AAG ATC TGT GAC TTC GGC TTG GCC
 Leu Leu Ser Glu Lys Asn Val Val Lys Ile Cys Asp Phe Gly Leu Ala
 1015 1020 1025

CGG GAC ATT TAT AAA GAC CCG GAT TAT GTC AGA AAA GGA GAT GCC CGA
 Arg Asp Ile Tyr Lys Asp Pro Asp Tyr Val Arg Lys Gly Asp Ala Arg
 1030 1035 1040 1045

CTC CCT TTG AAG TGG ATG GCC CCG GAA ACC ATT TTT GAC AGA GTA TAC
 Leu Pro Leu Lys Trp Met Ala Pro Glu Thr Ile Phe Asp Arg Val Tyr
 1050 1055 1060

ACA ATT CAG AGC GAT GTG TGG TCT TTC GGT GTG TTG CTC TGG GAA ATA
 Thr Ile Gln Ser Asp Val Trp Ser Phe Gly Val Leu Leu Trp Glu Ile
 1065 1070 1075

TTT TCC TTA GGT GCC TCC CCA TAC CCT GGG GTC AAG ATT GAT GAA GAA
 Phe Ser Leu Gly Ala Ser Pro Tyr Pro Gly Val Lys Ile Asp Glu Glu
 1080 1085 1090

Fig. 2.7

TTT TGT AGG AGA TTG AAA GAA GGA ACT AGA ATG CGG GCT CCT GAC TAC
 Phe Cys Arg Arg Leu Lys Glu Gly Thr Arg Met Arg Ala Pro Asp Tyr
 1095 1100 1105

ACT ACC CCA GAA ATG TAC CAG ACC ATG CTG GAC TGC TGG CAT GAG GAC
 Thr Thr Pro Glu Met Tyr Gln Thr Met Leu Asp Cys Trp His Glu Asp
 1110 1115 1120 1125

CCC AAC CAG AGA CCC TCG TTT TCA GAG TTG GTG GAG CAT TTG GGA AAC
 Pro Asn Gln Arg Pro Ser Phe Ser Glu Leu Val Glu His Leu Gly Asn
 1130 1135 1140

CTC CTG CAA GCA AAT GCG CAG CAG GAT GGC AAA GAC TAT ATT GTT CTT
 Leu Leu Gln Ala Asn Ala Gln Gln Asp Gly Lys Asp Tyr Ile Val Leu
 1145 1150 1155

CCA ATG TCA GAG ACA CTG AGC ATG GAA GAG GAT TCT GGA CTC TCC CTG
 Pro Met Ser Glu Thr Leu Ser Met Glu Glu Asp Ser Gly Leu Ser Leu
 1160 1165 1170

CCT ACC TCA CCT GTT TCC TGT ATG GAG GAA GAG GAA GTG TGC GAC CCC
 Pro Thr Ser Pro Val Ser Cys Met Glu Glu Glu Glu Val Cys Asp Pro
 1175 1180 1185

AAA TTC CAT TAT GAC AAC ACA GCA GGA ATC AGT CAT TAT CTC CAG AAC
 Lys Phe His Tyr Asp Asn Thr Ala Gly Ile Ser His Tyr Leu Gln Asn
 1190 1195 1200 1205

AGT AAG CGA AAG AGC CGG CCA GTG AGT GTA AAA ACA TTT GAA GAT ATC
 Ser Lys Arg Lys Ser Arg Pro Val Ser Val Lys Thr Phe Glu Asp Ile
 1210 1215 1220

CCA TTG GAG GAA CCA GAA GTA AAA GTG ATC CCA GAT GAC AGC CAG ACA
 Pro Leu Glu Glu Pro Glu Val Lys Val Ile Pro Asp Asp Ser Gln Thr
 1225 1230 1235

GAC AGT GGG ATG GTC CTT GCA TCA GAA GAG CTG AAA ACT CTG GAA GAC
 Asp Ser Gly Met Val Leu Ala Ser Glu Glu Leu Lys Thr Leu Glu Asp
 1240 1245 1250

AGG AAC AAA TTA TCT CCA TCT TTT GGT GGA ATG ATG CCC AGT AAA AGC
 Arg Asn Lys Leu Ser Pro Ser Phe Gly Gly Met Met Pro Ser Lys Ser
 1255 1260 1265

AGG GAG TCT GTG GCC TCG GAA GGC TCC AAC CAG ACC AGT GGC TAC CAG
 Arg Glu Ser Val Ala Ser Glu Gly Ser Asn Gln Thr Ser Gly Tyr Gln
 1270 1275 1280 1285

Fig. 2.8

TCT GGG TAT CAC TCA GAT GAC ACA GAC ACC ACC GTG TAC TCC AGC GAC
 Ser Gly Tyr His Ser Asp Asp Thr Asp Thr Thr Val Tyr Ser Ser Asp
 1290 1295 1300

GAG GCA GGA CTT TTA AAG ATG GTG GAT GCT GCA GTT CAC GCT GAC TCA
 Glu Ala Gly Leu Leu Lys Met Val Asp Ala Ala Val His Ala Asp Ser
 1305 1310 1315

GGG ACC ACA CTG CAG CTC ACC TCC TGT TTA AAT GGA AGT GGT CCT GTC
 Gly Thr Thr Leu Gln Leu Thr Ser Cys Leu Asn Gly Ser Gly Pro Val
 1320 1325 1330

CCG GCT CCG CCC CCA ACT CCT GGA AAT CAC GAG AGA GGT GCT GCT TAG
 Pro Ala Pro Pro Pro Thr Pro Gly Asn His Glu Arg Gly Ala Ala
 1335 1340 1345

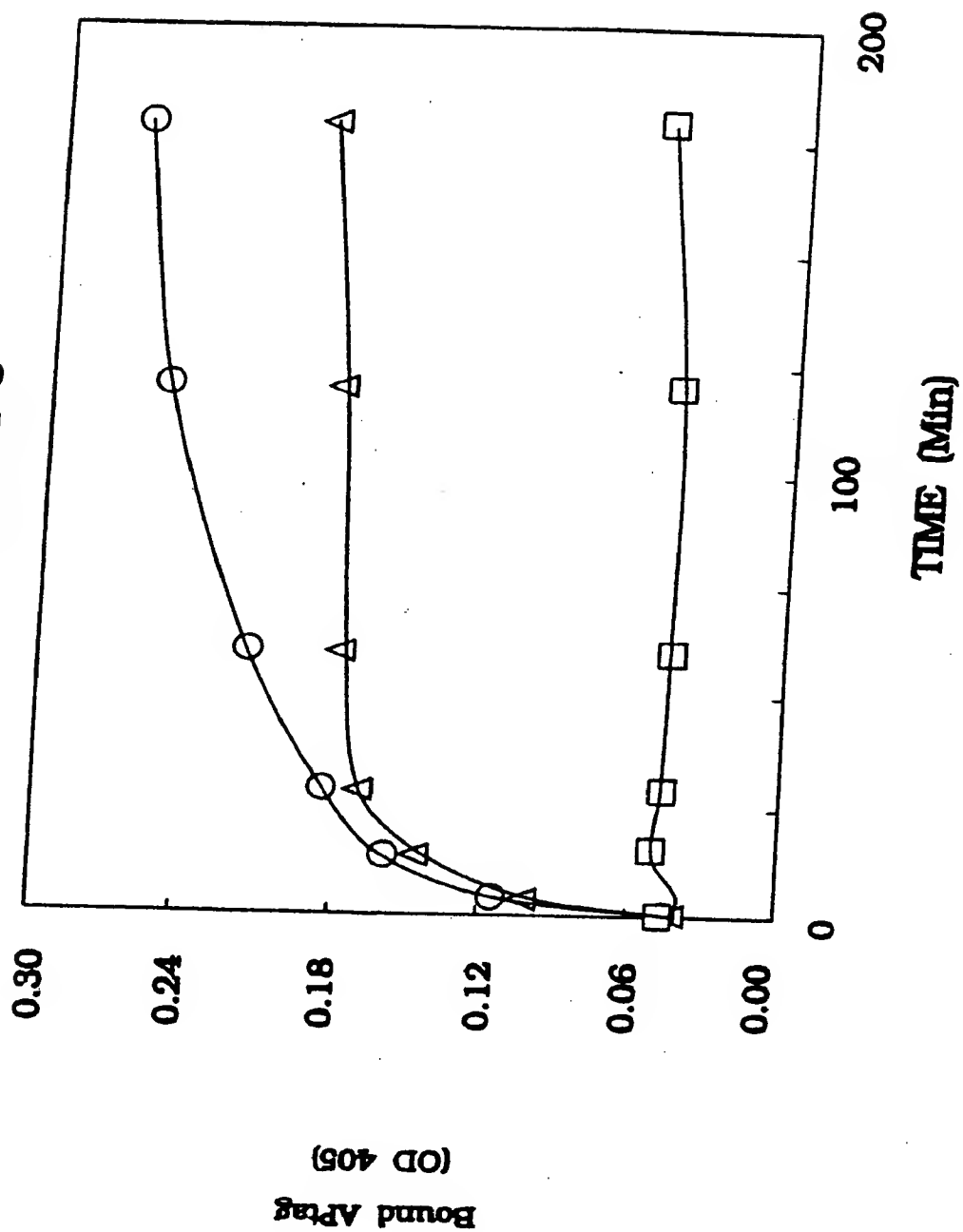
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 AGGAGGGACC TCAGACTGCA AGGAGCTTGT CCTCAGGGCA TTTCCAGAGA AGATGCCCCAT
 GACCCAAGAA TGTGTTGACT CTACTCTCTT TTCCATTTCAT TTAAAAGTCC TATATAATGT
 GCCCTGCTGT GGTCTCACTA CCAGTTAAAG CAAAAGACTT TCAAACACGT GGACTCTGTC
 CTCCAAGAAG TGGCAACGGC ACCTCTGTGA AACTGGATCG AATGGGCAAT GCTTTGTGTG
 TTGAGGATGG GTGAGATGTC CCAGGGCCGA GTCTGTCTAC CTTGGAGGCT TTGTGGAGGA
 TGCGGCTATG AGCCAAGTGT TAAGTGTGGG ATGTGGACTG GGAGGAAGGA AGGCGCAAGC
 CGTCCGGAGA GCGGTTGGAG CCTGCAGATG CATTGTGCTG GCTCTGGTGG AGGTGGGCTT
 GTGGCCTGTC AGGAAACGCA AAGGCGGCCG GCAGGGTTTG GTTTTGGAAG GTTTGCGTGC
 TCTTCACAGT CGGGTTACAG GCGAGTTCCC TGTGGCGTTT CCTACTCCTA ATGAGAGTTC
 CTTCCGGACT CTTACGTGTC TCCTGGCCTG GCCCCAGGAA GGAAATGATG CAGCTTGCTC
 CTTCTCATC TCTCAGGCTG TGCCTTAATT CAGAACACCA AAAGAGAGGA ACGTCGGCAG
 AGGCTCCTGA CGGGGCCGAA GAATTGTGAG AACAGAACAG AAATCAGGG TTTCTGCTGG
 GTGGAGACCC ACGTGGCGCC CTGGTGGCAG GTCTGAGGGT TCTCTGTCAA GTGGCGGTAA
 AGGCTCAGGC TGGTGTTCTT CCTCTATCTC CACTCCTGTC AGGCCCCCAA GTCCTCAGTA
 TTTTAGCTTT GTGGCTTCCT GATGGCAGAA AAATCTTAAT TGGTTGGTTT GCTCTCCAGA

Fig. 2.9

TAATCACTAG CCAGATTTTCG AAATTACTTT TTAGCCGAGG TTATGATAAC ATCTACTGTA
TCCTTTAGAA TTTTAACCTA TAAAACTATG TCTACTGGTT TCTGCCTGTG TGCTTATGTT
AAAAAAAAAA AAAAA

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FIGURE 3



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FIGURE 4

